

## REMARKS

Claims 1–11, 21–35, 37–46, 48–58, 67–75, 77–92, and 95 are pending in the application. Claims 52–58, 67–92, and 95 have been canceled as being drawn to a non-elected invention without prejudice to applicants' right to pursue the non-elected subject matter in one or more subsequent applications. Claims 1–11, 21–35, 37–46 and 48–51 have been examined and stand rejected. Claims 1, 4, 6, 23, 37, and 51 have been amended. Claims 3 and 5 have been canceled. No new matter has been introduced. Reconsideration and allowance of Claims 1, 2, 4, 6–11, 21–35, 37–46, and 48–51 is respectfully requested.

### The Objection to the Specification

The specification has been amended to deactivate embedded hyperlinks as requested by the Examiner. Removal of the objection to the specification is respectfully requested.

### The Objection to Claims 1, 23, and 51

Claim 1 is objected to for the recitation of "a" with plural "motifs". Claim 1 has been amended to clarify the invention and now recites in relevant part, "a method for selecting from a plurality of different siRNAs one or more siRNAs for silencing a target gene in an organism, each different siRNA in said plurality of different siRNAs targeting a different target sequence in a transcript of said target gene, said method comprising (a) calculating a score for a corresponding targeted sequence motif in said transcript, for each said different siRNA in said plurality of different siRNAs . . . ."

Claim 23 has been amended to replace the term "FastA" with the term "FASTA."

Claim 51 has been amended to replace the term "threshold" with the term "thresholds" as suggested by the Examiner.

Removal of this ground of objection is respectfully requested.

The Rejection of Claims 1–11, 21–35, 37–46, and 48–51 Under 35 U.S.C. § 101

Claims 1–11, 21–35, 37–46, and 48–51 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 3 and 5 have been canceled.

In order to facilitate prosecution, Claim 1, from which Claims 2, 4, 6–11, 21–35, 37–46, and 48–51 depend, has been amended and now recites:

A method for selecting from a plurality of different siRNAs one or more siRNAs for silencing a target gene in an organism, each different siRNA in said plurality of different siRNAs targeting a different target sequence in a transcript of said target gene, said method comprising

(a) calculating a score for a corresponding targeted sequence motif in said transcript, for each said different siRNA in said plurality of different siRNAs, wherein said score is calculated using a position-specific score matrix (PSSM), wherein each said sequence motif is a nucleotide sequence of  $L$  nucleotides,  $L$  being an integer, and wherein said PSSM is  $\{\log(e_{ij}/p_{ij})\}$ , where  $e_{ij}$  is the weight of nucleotide  $i$  at position  $j$ ,  $p_{ij}$  is the weight of nucleotide  $i$  at position  $j$  in a random sequence, and  $i = G \text{ or } C, A, U(T), j = 1, \dots, L$ , wherein each of said targeted sequence motifs comprises at least a portion of the target sequence of the corresponding siRNA and/or a second sequence in a sequence region flanking said target sequence;

(b) ranking said plurality of different siRNAs according to said scores; and

(c) selecting one or more siRNAs from said ranked siRNAs, wherein at least one of steps (a), (b) or (c) is performed by a suitably programmed computer.

Support for step (a) is found in original Claims 3 and 5, now canceled, and in the specification, published as WO 2005/042708, at page 5, lines 11–29. Support for the phrase "wherein at least one of steps (a), (b) or (c) is performed by a suitably programmed computer," is found in the specification at page 18, lines 12–21; page 20, lines 23–24; page 72, line 21, to page 74, line 27; and FIGURE 12.

Removal of this ground of rejection is respectfully requested.

The Rejection of Claims 1–3 Under 35 U.S.C. § 102(a) and (e) as Being Anticipated by U.S. Publication No. 2003/0166282 (Brown et al.)

Claims 1–3 stand rejected under 35 U.S.C. § 102(a) and (e) as being anticipated by U.S. Publication No. 2003/0166282 (Brown et al.). While not acquiescing to the Examiner's position, but in order to facilitate prosecution, Claim 1 has been amended to incorporate the limitations of Claims 3 and 5, now canceled. It is noted that Brown et al. does not teach or suggest a method of calculating scores for siRNAs as recited in Claim 1, as amended. Accordingly, removal of this ground of rejection is respectfully requested.

The Rejection of Claims 1–2 Under 35 U.S.C. § 102(e) as Being Anticipated by U.S. Publication No. 2003/0175950 (McSwiggén).

Claims 1–2 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Publication No. 2003/0175950 (McSwiggén). While not acquiescing to the Examiner's position, but in order to facilitate prosecution, as noted above, Claim 1 has been amended to incorporate

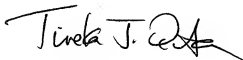
the limitations of Claims 3 and 5, now canceled. It is noted that McSwiggen does not teach or suggest a method of calculating scores for siRNAs as recited in Claim 1, as amended. Accordingly, removal of this ground of rejection is respectfully requested.

#### Conclusion

Applicants believe that all of the pending claims are in condition for allowance. Reconsideration and favorable action are requested. If any issues remain that may be expeditiously addressed in a telephone interview, the Examiner is encouraged to telephone applicants' attorney at 206.695.1655.

Respectfully submitted,

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